C2 Dep't Cont Cancel

a contact tip structure secured to an end of the freestanding resilient elongate element.

95. The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a core element, and wherein the core element has a diameter in the range of from 0.25 to 10 mils.

C3

96. The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a core element, and wherein the core element has a diameter in the range of from 0.5 to 3 mils.

97. The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a core element, and wherein the core element has a length in the range of from 10 mils to 500 mils.

98. The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a shell, and wherein the shell has at least one layer which comprises a material which is selected for its ability to provide mechanical properties selected from the group consisting of spring properties, resiliency yield strength and compliance for the resilient elongate element.

C4 Cont

101. (New) The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a shell, and wherein the shell has at least one layer which comprises a material selected from the group consisting of nickel, iron, and cobalt.

102. The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a shell, and wherein the shell has at least one layer which comprises a material selected from the group consisting of copper, nickel, cobalt, tin, boron, phosphorous, chromium, tungsten, molybdenum, bismuth, indium, cesium, antimony, gild, silver, rhodium, palladium, platinum, lead, and ruthenium.

103. The interconnection component, according to claim 87 wherein:
said freestanding resilient elongate element comprises a core element and a shell, and wherein the core element comprises gold and the shell comprises a material selected from the group consisting of nickel and cobalt.

106. An electronics assembly comprising:
a substrate;
a freestanding resilient elongate element having a first end secured to the substrate; and a contact tip structure secured to the second end of the freestanding resilient elongate element opposing the first end.

107. The electronics assembly, according to claim 106 further comprising:
a plurality of freestanding resilient elongate elements, each having a first end secured to the substrate; and a plurality of contact tip structures, each secured to a respective end of the respective freestanding resilient elongate element opposing a respective first end thereof.

108. The electronics assembly, according to claim 106 wherein:
the contact tip structure is separately fabricated and mounted to the freestanding resilient elongate element.

109. The electronic assembly, according to claim 108 wherein:
the freestanding resilient elongate element has a relatively flexible core element and a layer on the relatively flexible core element.

C5 Cncld

110. The electronic assembly, according to claim 108 wherein:
the freestanding resilient elongate element has a relatively flexible core and a layer, on the relatively flexible core element, of a material selected from the group consisting of nickel, an alloy of nickel, cobalt, an alloy of cobalt and an alloy of nickel and cobalt.

112. The electronics assembly, according to claim 106 wherein:
the freestanding resilient elongate element has a core element and a shell;
the core element is readily-shaped and comprises a material selected form the group consisting of:
(a) gold, aluminum and copper with small amounts of beryllium, cadmium, silicon and magnesium, and
(b) metals of the platinum group, and
(c) lead, tin, and indium.

C6

113. The electronics assembly, according to claim 109 wherein:
the layer comprises a material which is selected for its ability to provide mechanical properties selected from the group consisting of spring properties, resiliency yield strength and compliance for the freestanding resilient elongate element.